

CLAIM AMENDMENTS

1. (currently amended) ~~A system~~ Apparatus for integrating a seller's Web site with a public key infrastructure, ~~the Web site comprising a Web server and a Web application, wherein:~~

~~the public key infrastructure comprising~~ comprises a buyer computer ~~comprising~~ having a Web browser adapted to invoke a signing interface to digitally sign electronic messages, ~~the public key infrastructure further comprising~~ and a seller's bank computer system adapted to receive service requests from the seller and to respond to those requests ~~with digitally signed service responses and;~~

~~the system comprising~~ seller's Web site comprises:

a filter adapted to redirect HTTP requests received from the Web browser;

coupled to the filter, an Internet server application adapted to receive a redirected HTTP request from the filter and to process the redirected HTTP request; and

coupled to the Internet server application, a filter engine adapted to receive the processed HTTP request and to identify an HTTP request that contains data requiring a digital signature by the buyer computer.

2. (currently amended) The ~~system~~ apparatus of claim 1, wherein:

the filter engine is further adapted to identify an HTTP request that requires accessing a service offered by the seller's bank and to formulate a request for the service; ; and ~~wherein~~

~~the system~~ seller's Web site further comprises: , coupled to the filter engine, a bank interface adapted to receive the request from the filter engine, reformat the request, and transmit the request to the seller's bank.

3. (currently amended) The ~~system~~ apparatus of claim 2, wherein the bank interface is further adapted to receive a service response to the request from the seller's bank, and forward the response to the filter engine.

4. (currently amended) The ~~system~~ apparatus of claim 2, wherein the service is certificate validation.

5. (currently amended) The ~~system~~ apparatus of claim 1, wherein the seller's Web site further comprising comprises, coupled to the filter, a ~~second~~ Web server adapted to parse requests redirected by the filter.

6. (currently amended) The ~~system~~ apparatus of claim 1, wherein services provided by the seller's bank are provided within the context of a four-corner model.

7. (currently amended) The ~~system~~ apparatus of claim 6, wherein the four-corner model comprises the buyer, the seller, the seller's bank, and a buyer's bank.

8. (currently amended) The ~~system~~ apparatus of claim 1, wherein the filter is implemented using ISAPI.

9. (currently amended) The ~~system~~ apparatus of claim 1, wherein the Internet ~~service~~ server application is adapted to generate HTTP responses based on data received from the filter engine.

10. (currently amended) The ~~system~~ apparatus of claim 1, wherein the Internet server application is adapted to pass a hash table to the filter engine.

11. (currently amended) The ~~system~~ apparatus of claim 10, wherein the hash table comprises ~~the~~ headers from the redirected HTTP request.

12. (currently amended) The ~~system~~ apparatus of claim 10, wherein the hash table ~~comprises the~~ indicates a method of the redirected HTTP request.

13. (currently amended) The ~~system~~ apparatus of claim 10, wherein the hash table comprises the content-type of the redirected HTTP request.

14. (currently amended) The ~~system apparatus~~ of claim 10, wherein the hash table comprises the buyer computer's IP address.

15. (currently amended) The ~~system apparatus~~ of claim 10, wherein the hash table comprises the actual data in the redirected HTTP request.

16. ((currently amended) The ~~system apparatus~~ of claim 10, wherein the hash table comprises a unique session ID.

17. (currently amended) ~~The system of claim 1~~ A system for integrating a seller's Web site with a public key infrastructure, the Web site comprising a Web server and a Web application, the public key infrastructure comprising a buyer computer comprising a Web browser adapted to invoke a signing interface to digitally sign electronic messages, the public key infrastructure further comprising a seller's bank computer system adapted to receive service requests from the seller and respond to those requests with digitally signed service responses; the system comprising:

a filter adapted to redirect HTTP requests received from the Web browser;

an Internet server application adapted to receive a redirected HTTP request from the filter and process the redirected HTTP request; and

a filter engine adapted to receive the processed HTTP request and identify an HTTP request that contains data requiring signature by the buyer; wherein;

the Internet ~~service~~ server application is a servlet.

18. (currently amended) The system of claim ~~20~~ 17, wherein the servlet is constructed as a public class object that extends javax.servlet.http.HttpServlet.

19. (currently amended) The system of claim ~~24~~ 18, wherein the public class object comprises at least one of a callFilterEngine method, a doGet method, a doPost method, a getRequestHeaders method, a handle Request method, ~~and~~ an init method, a print ErrorResponse

method, a printPluginPage method, a readMessage method, a read RequestData method, and a setServletHeaders method.

20. (previously presented) The system of claim 17, wherein the filter engine is adapted to return an object to the servlet.

21. (currently amended) The ~~system~~ apparatus of claim 20, wherein the object comprises an integer value indicating one of the following four conditions:

~~that~~ a signature is required on data in the HTTP request, ~~that~~ ;  
a response has been received from the seller's bank concerning a service request, ~~that~~ ;  
the HTTP request has been passed through to ~~the~~ a Web application, ~~or that~~ ;  
an error occurred.

22. (currently amended) The ~~system~~ apparatus of claim 1 + 21, wherein ~~if~~ when the integer value indicates that a signature is required on data in the HTTP request ~~then~~, the Internet server application stores a state of the filter engine in a cookie and causes a Web page containing the cookie and an instruction to sign the data to be transmitted to the Web browser.

23. (currently amended) The ~~system~~ apparatus of claim 1, wherein the filter engine determines whether an HTTP request contains data requiring signature by applying filtering rules.

24. (currently amended) The ~~system~~ apparatus of claim 1, wherein the filter engine is programmed to recognize each HTTP request that includes data requiring a digital signature by the buyer's computer.

25. (currently amended) The ~~system~~ apparatus of claim 1, wherein the filter engine is programmed to recognize HTTP requests transmitted by the Web browser that have been modified to include a special tag that indicates whether the request includes data that requires a digital signature by the buyer's computer.

26. (currently amended) ~~The system of claim 1~~ A system for integrating a seller's Web site with a public key infrastructure, the Web site comprising a Web server and a Web application, the public key infrastructure comprising a buyer computer comprising a Web browser adapted to invoke a signing interface to digitally sign electronic messages, the public key infrastructure further comprising a seller's bank computer system adapted to receive service requests from the seller and respond to those requests with digitally signed service responses; the system comprising:

a filter adapted to redirect HTTP requests received from the Web browser;

an Internet server application adapted to receive a redirected HTTP request from the filter and process the redirected HTTP request; and

a filter engine adapted to receive the processed HTTP request and identify an HTTP request that contains data requiring signature by the buyer; wherein;

the filter engine is implemented as a public class object that extends java.lang.Object.

27. (currently amended) The system of claim 26, wherein the public class object comprises at least one of the following methods: a callWebApp method, a getSessionID method, a newRequestHandler method, an oldRequestHandler method, a service method, and a signedRequestHandler method.

28. (currently amended) The ~~system~~ apparatus of claim 1, wherein the filter engine provides an abstracted front end interface via an object oriented computer programming language remote method invocation.

29. (currently amended) The ~~system~~ apparatus of claim 1, wherein the filter engine employs a rules class.

30. (currently amended) ~~The system of claim 1~~ A system for integrating a seller's Web site with a public key infrastructure, the Web site comprising a Web server and a Web application, the public key infrastructure comprising a buyer computer comprising a Web

browser adapted to invoke a signing interface to digitally sign electronic messages, the public key infrastructure further comprising a seller's bank computer system adapted to receive service requests from the seller and respond to those requests with digitally signed service responses; the system comprising:

a filter adapted to redirect HTTP requests received from the Web browser;

an Internet server application adapted to receive a redirected HTTP request from the filter and process the redirected HTTP request;

a filter engine adapted to receive the processed HTTP request and identify an HTTP request that contains data requiring signature by the buyer, further comprising; and

a rules class, wherein the rules class comprises the following methods: a getMode method, a getService method, a readRules method, a rulesMatch method, and a validateRules method.

31. (currently amended) The system apparatus of claim 1; wherein the seller's Web site further comprising comprises, coupled to the filter engine, a bank interface, wherein the bank interface is designed with a plug-in based architecture.

32. (currently amended) The system apparatus of claim 1; wherein the seller's Web site further comprising comprises, coupled to the filter engine, a bank interface, wherein the bank interface supports supporting an abstract front-end interface to allow communication via a plurality of middleware technologies.

33. (currently amended) The system apparatus of claim 1; wherein the seller's Web site further comprising comprises, coupled to the filter engine, a bank interface, wherein the bank interface is adapted to create and transmit OCSP requests.

34. (currently amended) The system apparatus of claim 1; wherein the seller's Web site further comprising comprises, coupled to the filter engine, a bank interface, wherein the bank interface comprises comprising a certificate status check module.

35. (currently amended) ~~The system of claim 1~~ A system for integrating a seller's Web site with a public key infrastructure, the Web site comprising a Web server and a Web application, the public key infrastructure comprising a buyer computer comprising a Web browser adapted to invoke a signing interface to digitally sign electronic messages, the public key infrastructure further comprising a seller's bank computer system adapted to receive service requests from the seller and respond to those requests with digitally signed service responses; the system comprising:

a filter adapted to redirect HTTP requests received from the Web browser;

an Internet server application adapted to receive a redirected HTTP request from the filter and process the redirected HTTP request;

a filter engine adapted to receive the processed HTTP request and identify an HTTP request that contains data requiring signature by the buyer, further comprising; and

a bank interface, wherein the bank interface comprises a public class object that extends java.lang.Object.

36. (currently amended) ~~The system of claim 1~~ A system for integrating a seller's Web site with a public key infrastructure, the Web site comprising a Web server and a Web application, the public key infrastructure comprising a buyer computer comprising a Web browser adapted to invoke a signing interface to digitally sign electronic messages, the public key infrastructure further comprising a seller's bank computer system adapted to receive service requests from the seller and respond to those requests with digitally signed service responses; the system comprising:

a filter adapted to redirect HTTP requests received from the Web browser;

an Internet server application adapted to receive a redirected HTTP request from the filter and process the redirected HTTP request;

a filter engine adapted to receive the processed HTTP request and identify an HTTP request that contains data requiring signature by the buyer, further comprising; and

a public class, wherein the public class object comprises a createOCSPRequest method, a getCertificateID method, a getCertStatus method, a getCertVerifyMessage method, a getURL method, an isResponseSuccessful method, a logAndBuildReturnObject method, a processOCSP method, a sendAndReceiveMessage method, a serviceRequest method, and a verifyResponseSignature method.

37. (currently amended) ~~A system Apparatus~~ for integrating a seller's Web site with a public key infrastructure, said apparatus comprising:

a Web server located at the seller's Web site;

a Web application ~~connected~~ coupled to the Web server and also located at the seller's Web site, the Web application adapted to:

identify those HTTP requests from a buyer that include data requiring a digital signature of the buyer and to;

create a Web page for transmission to a browser controlled by the buyer that will cause the browser to invoke a signing interface to digitally sign the data; and

~~the Web application further adapted to identify those HTTP requests that require a service provided by an entity other than the seller; and~~

coupled to the Web application and also located at the seller's Web site, a bank an interface module adapted to receive a request for service from the Web application, format and transmit the request, receive a response to the request, and forward the response to the Web application.